

during the rather elaborate process of the egg laying of sea turtles, described by her, agree closely with our present knowledge on the subject and, especially in view of the fact that our earliest accurate but short account of the sea turtle (Loggerhead) breeding, mentioned in the Old John Speed Atlas, dates back only to 1622. The above description of Nappasalaiyār (circa 4th century A.D.) is clear evidence not only of the keen interest that our ancients evinced in natural history but also of their remarkable powers of accurate observation and description.

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REFERENCES

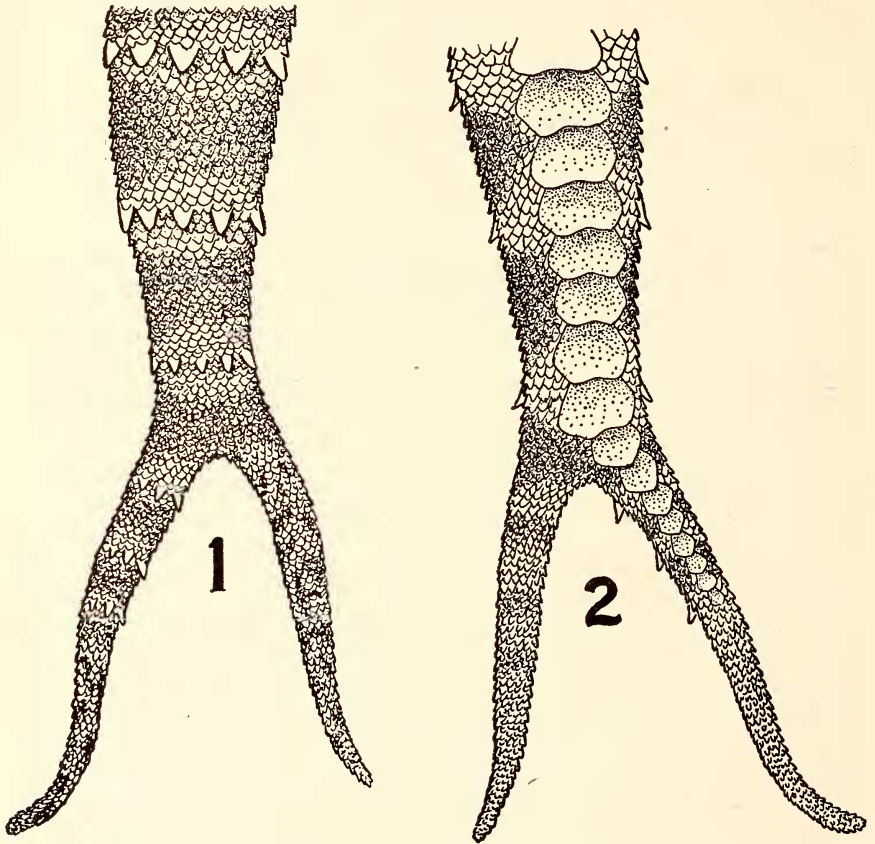
- Cameron, T. H. (1923): *JBNHS* 29 : 299-300.
 Deraniyagala, P. E. P. (1930): *Ceylon J. Sci. Sect. B*, 16 : 43-88.
 Hora, S. L. (1935): *Journ. As. Soc. Bengal. Science I* : 1-7.
 — (1951): *Arch. Inter. D' Hist. Des. Sci.* 15 : 405-412.
 Hora, S. L. (1953): *Birla Vidya Vihar Magazine* 1-6.
 Jayaram, K. C. (1950): *J. Zool. Soc. Ind.* 2 : 34-38.
 Lourduswamy, P. (1953): *Tamil culture*. II (1) : 81.
 Mawson, N. (1921): *JBNHS* 27:956-957
 Rao, H. S. (1957): *JBNHS* 54: 251-280

22. ON THE ABNORMAL TAIL OF A GECKO

It is common knowledge that geckos can snap off the tail at will and regenerate new ones. In most cases this new tail appears as a continuation of the original one and is exactly similar to the lost one in most of the important characters. Hora (1926, *Rec. Ind. Mus.* 28: 193) recorded a specimen of *Hemidactylus brooki* Gray with a triradiate tail. The tail was composed of a normal median limb and two perfectly symmetrical short limbs starting from the base of the former. The following note is based on a specimen of *Hemidactylus brooki* caught from the Marine Biological Laboratory, Trivandrum.

The major part of the tail is normal, clearly showing the dorsal scutes and the ventral plates, but the distal one-fifth is clearly forked. The fork is asymmetrical, the left limb being slightly longer and more slender than the right. The left limb possesses the dorsal scutes and the ventral plates characteristic of the species, but both scutes and plates are absent on the right limb. The external characters thus clearly indicate that the left limb is the normal original tail and the shorter right limb an abnormal development. The growth of the accessory limb slightly displaced the original tail, producing a dichotomous appearance.

The skeletal structure was studied from a transparent preparation, stained with alizarine red. This has confirmed the conclusions based on the external characters. The vertebral column is continued on to the longer limb and is clearly demarcated into vertebrae. The vertebra at the base of the fork is bifid, the branches entering into the limbs of the fork. The branch which enters the shorter right limb

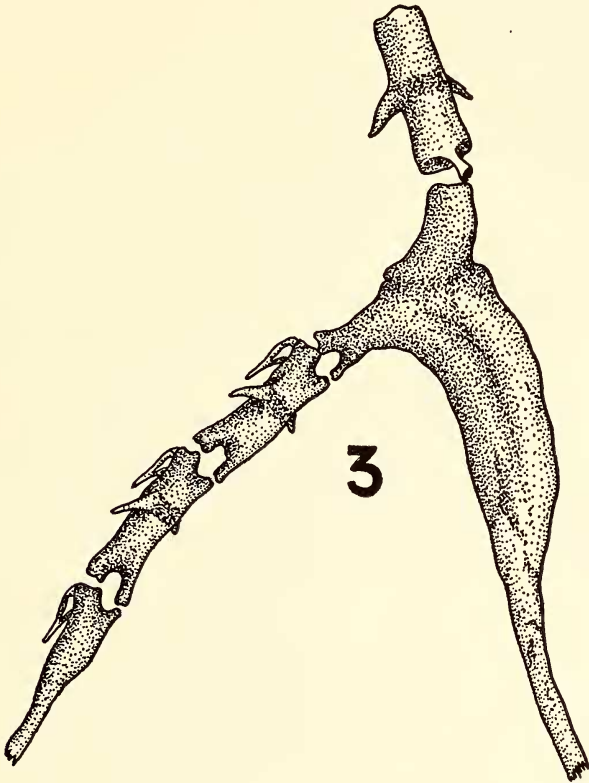


1. Tip of tail (dorsal view).

2. Tip of tail (ventral view).

provides the skeleton of the accessory limb and is not divided into vertebrae. Its basal one-third is bulky and the distal two-thirds slender. A typical caudal vertebra has two transverse processes placed exactly at the middle. The accessory skeleton starts from the middle of the vertebra where the transverse process is usually seen and thus appears to be the modified and enlarged transverse process. This seems probable, because the corresponding transverse process, though degenerated, is visible on the other side.

According to Deraniyagala (*Ceylon J. Sci.* 13: 291) 'the new tail regenerates only the chorda without the vertebrae' and the 'additional tails arise as regenerations of wounds which fail to break off the original'. In the light of this observation, it appears that in the present case the tail sustained two injuries. One of the injuries affected the



3. Caudal skeleton (dorsal view).

tail exactly at the middle of a vertebra and this resulted in the growth of an additional limb. The other injury broke off the tip of the tail and a new one was regenerated as a continuation of the original. This is evident since the tip of the longer limb is exactly like the shorter limb, devoid of vertebrae, dorsal scutes and ventral scales.

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